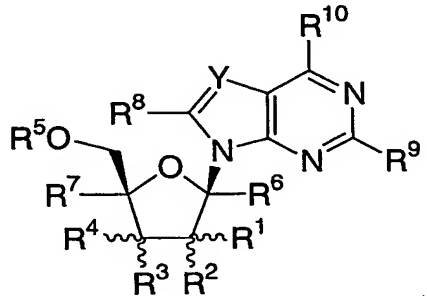
WHAT IS CLAIMED IS:

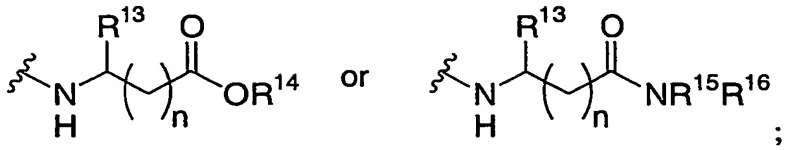
1. A compound of the structural formula I:



(I)

or a pharmaceutically acceptable salt thereof; wherein
n is 0, 1, or 2;
Y is N or C-R^{17};
R^1 is C_{2-4} alkenyl, C_{2-4} alkynyl, or C_{1-4} alkyl, wherein alkyl is unsubstituted or substituted with hydroxy, amino, C_{1-4} alkoxy, C_{1-4} alkylthio, or one to three fluorine atoms;
R^2 is hydrogen, amino, fluorine, hydroxy, mercapto, C_{1-4} alkoxy, or C_{1-4} alkyl;
R^3 and R^4 are each independently selected from the group consisting of hydrogen, cyano, azido, halogen, hydroxy, mercapto, amino, C_{1-4} alkoxy, C_{2-4} alkenyl, C_{2-4} alkynyl, and C_{1-4} alkyl, wherein alkyl is unsubstituted or substituted with hydroxy, amino, C_{1-4} alkoxy, C_{1-4} alkylthio, or one to three fluorine atoms;
R^5 is hydrogen, C_{1-10} alkylcarbonyl, $P_3O_9H_4$, $P_2O_6H_3$, or $P(O)R^{11}R^{12}$;
R^6 and R^7 are each independently hydrogen, methyl, hydroxymethyl, or fluoromethyl;
R^8 is hydrogen, C_{1-4} alkyl, C_{2-4} alkynyl, halogen, cyano, carboxy, C_{1-4} alkyloxycarbonyl, azido, amino, C_{1-4} alkylamino, di(C_{1-4} alkyl)amino, hydroxy, C_{1-6} alkoxy, C_{1-6} alkylthio, C_{1-6} alkylsulfonyl, or (C_{1-4} alkyl)$_{0-2}$ aminomethyl;
R^9 is hydrogen, hydroxy, halogen, C_{1-4} alkoxy, C_{1-4} alkylthio, amino, C_{1-4} alkylamino, di(C_{1-4} alkyl)amino, C_{3-6} cycloalkylamino, or di(C_{3-6} cycloalkyl)amino;
R^{10} is C_{1-4} alkylamino, wherein the alkyl moiety is substituted with one to three halogen atoms; $-OCH_2CH_2SC(=O)C_{1-4}$ alkyl; $-OCH_2O(C=O)OC_{1-4}$ alkyl;

-OCH(C_{1-4} alkyl)O(C=O)C_{1-4} alkyl; or an amino acyl residue having structural formula



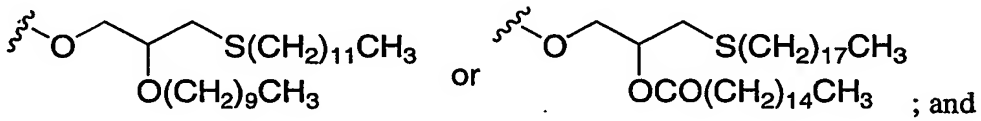
;

R^{13} is hydrogen, C_{1-4} alkyl, or phenyl C_{0-2} alkyl;

R^{14} is hydrogen or C_{1-4} alkyl;

R^{15}, R^{16}, R^{18}, and R^{19} are each independently hydrogen or C_{1-4} alkyl;

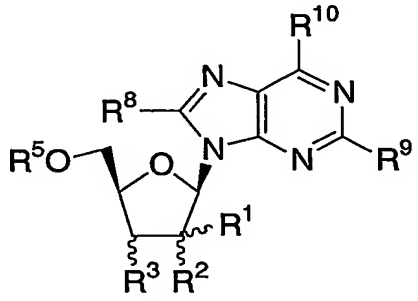
R^{11} and R^{12} are each independently hydroxy, -$OCH_2CH_2SC(=O)C_{1-4}$ alkyl, -$OCH_2O(C=O)OC_{1-4}$ alkyl, -NHCH(C_{0-4} alkyl)CO_2C_{1-3} alkyl, -OCH(C_{1-4} alkyl)O(C=O)C_{1-4} alkyl,



; and

R^{17} is hydrogen, halogen, cyano, nitro, $NHCONH_2$, $CONR^{18}R^{19}$, $CSNR^{18}R^{19}$, $COOR^{18}$, $C(=NH)NH_2$, hydroxy, C_{1-3} alkoxy, amino, C_{1-4} alkylamino, di(C_{1-4} alkyl)amino, or C_{1-3} alkyl; wherein alkyl is unsubstituted or substituted with one to three groups independently selected from halogen, amino, hydroxy, carboxy, and C_{1-3} alkoxy.

2. The compound of Claim 1 of the structural formula II:

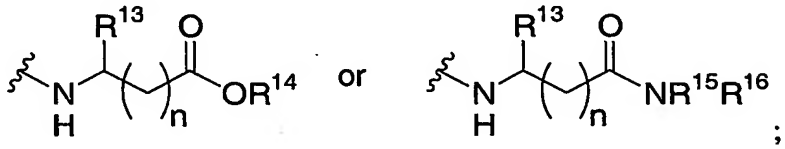


(II)

or a pharmaceutically acceptable salt thereof;

wherein R^3 is hydrogen, halogen, hydroxy, amino, or C_{1-4} alkoxy;

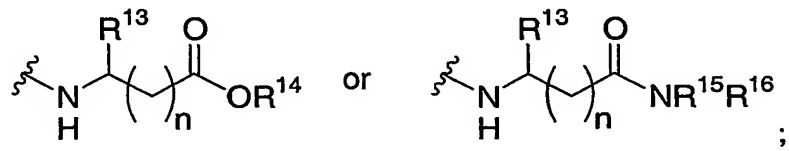
R^1 is C_{1-3} alkyl, wherein alkyl is optionally substituted with hydroxy, amino, C_{1-3} alkoxy, C_{1-3} alkylthio, or one to three fluorine atoms;
R^2 is hydroxy, fluoro, or C_{1-3} alkoxy;
R^5 is hydrogen, $P_3O_9H_4$, $P_2O_6H_3$, or PO_3H_2;
R^8 is hydrogen, amino, or C_{1-4} alkylamino;
R^9 is hydrogen, halogen, hydroxy, amino,
C_{1-4} alkylamino, di(C_{1-4} alkyl)amino, or C_{3-6} cycloalkylamino;
R^{10} is C_{1-3} alkylamino, wherein the alkyl moiety is substituted with one to three fluorine atoms; or an amino acyl residue having structural formula



;

R^{13} is hydrogen, C_{1-4} alkyl, or phenyl C_{0-2} alkyl;
R^{14} is hydrogen or C_{1-4} alkyl; and
R^{15} and R^{16} are each independently hydrogen or C_{1-4} alkyl.

3. The compound of Claim 2 wherein
R^1 is methyl, fluoromethyl, hydroxymethyl, difluoromethyl, trifluoromethyl, or aminomethyl;
R^2 is hydroxy, fluoro, or methoxy;
R^3 is hydrogen, fluoro, hydroxy, amino, or methoxy;
R^5 is hydrogen or $P_3O_9H_4$;
R^8 is hydrogen or amino;
R^9 is hydrogen, fluoro, hydroxy, or amino;
R^{10} is 2,2,2-trifluoroethylamino or an amino acyl residue having structural formula



;

R^{13} is hydrogen, C_{1-4} alkyl, or phenyl C_{0-2} alkyl;

R^{14} is hydrogen or C_{1-4} alkyl; and
R^{15} and R^{16} are each independently hydrogen or C_{1-4} alkyl.

4. The compound of Claim 3 selected from the group consisting of:
2-[2-amino-6-(2,2,2-trifluoroethylamino)-9-(2-*C*-methyl-β-D-ribofuranosyl)-9H-purine;
3-[2-amino-9-(2-*C*-methyl-β-D-ribofuranosyl)-9H-purin-6-yl-amino]propionic acid methyl ester; and
2-[2-amino-9-(2-*C*-methyl-β-D-ribofuranosyl)-9H-purin-6-yl-amino]-acetamide;
and the corresponding 5'-triphosphates;
or a pharmaceutically acceptable salt thereof.

5. A pharmaceutical composition comprising a compound of Claim 1 and a pharmaceutically acceptable carrier.

6. A method of treating RNA-dependent RNA virus infection comprising administering to a mammal in need of such treatment a therapeutically effective amount of a compound according to Claim 1.

7. The method of Claim 6 wherein said RNA-dependent RNA virus infection is hepatitis C virus (HCV) infection.

8. The method of Claim 7 in combination with a therapeutically effective amount of another agent active against HCV.

9. The method of Claim 8 wherein said agent active against HCV is ribavirin; levovirin; thymosin alpha-1; interferon-β; an inhibitor of NS3 serine protease; an inhibitor of inosine monophosphate dehydrogenase; interferon-α or pegylated interferon-α, alone or in combination with ribavirin or levovirin.

10. The method of Claim 9 wherein said agent active against HCV is interferon-α or pegylated interferon-α, alone or in combination with ribavirin.

11. Use of a compound of Claim 1 for treatment of RNA-dependent RNA virus infection in a mammal.

12. The use of Claim 11 wherein said RNA-dependent RNA virus infection is HCV infection.

13. Use of a compound of Claim 1 in the manufacture of a medicament for treatment of RNA-dependent RNA virus infection in a mammal.

14. The use of Claim 13 wherein said RNA-dependent RNA virus infection is HCV infection.